

REMARKS

Specification. The Abstract is amended as suggested. As to the asserted incorporation by reference, the objection is understood to be based on, first, an assumption that the other applications are being incorporated by reference and, second, lack of a statement that the other applications are commonly assigned.

(1) MPEP §608.01(p)(I)(A) states that “mere reference to another application ... is not an incorporation [under §] 112, first paragraph” and the Applicant believes that it has not been established that the mentioned applications are actually being incorporated by reference.

(2) Under MPEP §608.01(p)(I)(A), non-essential material can be incorporated by reference to a U.S. patent application if the application is commonly assigned.

The MPEP is seen to include no requirement that there be any statement about common assignment, only a requirement that the applications *actually* be commonly assigned. However, the specification is now amended to include such a statement. This statement is based on information from the undersigned attorney's foreign counterpart, and is believed to be accurate. However, the undersigned attorney has no way to check on the status of confidential applications that are being prosecuted by other law firms, and must rely on the Examiner to confirm the information, if confirmation is required.

(3) It is not decided whether or not the listed applications contain essential material. Though listed in the Background section, their disclosures could be related to enablement. Under MPEP §608.01(p)(I)(A), essential material can be incorporated by reference to another application even if the other application is not commonly assigned.

§ 112, second paragraph. Claim 1 was rejected for “low temperature.” This phrase is removed from claim 1 and replaced by a specific temperature, which is believed to be definite. In claim 2, correction is made as pointed out by the Examiner.

§ 103. Claims 1-4 were rejected under § 103 over Yamazaki '118. This rejection is respectfully traversed. As to claim 1:

(1) The new limitation of about equal to or less than 100 °C is not disclosed by Yamazaki. Neither is there any suggestion toward the claimed temperature, because Yamazaki teaches that the temperature should be more than 200 °C (col. 4, lines 23-24 and 66-67; col. 8, line 19).

(2) The Examiner admits that Yamazaki does not disclose an ultraviolet rays generator, but states that this would be an obvious variation of Yamazaki's UV source 21.

The Examiner is invited to consider that the Applicant's claimed vacuum UV is of shorter wavelength and higher energy than that of the prior art. The Applicant's xenon excimer lamp provides UV light photons of 172 nm wavelength and 7.2 eV of energy, which allows them to cause chemical reactions impossible under the disclosure of Yamazaki.

Relative to the mercury-vapor lamp disclosed by Yamazaki at col. 3, line 29, the Examiner is invited to consider the attached photocopy of page 182 from volume 11 of the Encyclopedia Britannica, showing that the main UV emission from a mercury-vapor lamp is 254 nm, with a secondary emission is at 185 nm. The photon energy corresponding to 185 nm is 6.7 eV, while that at 254 nm will be 4.9 eV (by proportionality, since $E=h\nu$). The encyclopedia states that at low vapor pressures, the emission is almost entirely at 254 nm, and the Applicant believes that the low-pressure mercury lamp is the common type, exemplified by an ordinary fluorescent lamp. Because Yamazaki only mentions the lamps without any elaboration, the ordinary low-pressure type is almost certainly type referred to by Yamazaki. Therefore, the mercury-vapor lamp of Yamazaki very probably produces photons with energy limited to 4.9 eV, that cannot break an Si-N bond of 5.0 eV (page 8, line 4 of the Applicant's specification).

As to claim 3: Yamazaki cannot anticipate or suggest the subject matter of claim 3, which recites the use of a gas with Si-N bonds; Yamazaki's UV light cannot break Si-N bonds.

As to claim 2: As noted, Yamazaki does not disclose or suggest any range up to 100 °C. Still less does the reference disclose or suggest a lower limit even farther below the 200 °C of Yamazaki.

As to claim 4: Yamazaki at col. 2, line 46, mentions only two gases: “reaction gas” and “dilution gas.” Claim 1 recites an organic stock gas, and claim 4 recites an additive gas for increasing nitrogen content in the protective film, or a regulator gas. Yamazaki’s dilution gas is not disclosed to increase nitrogen content, so it cannot anticipate this feature of claim 4.

As to the new claims: As discussed above in relation to claim 1, the new claims recite subject matter not disclosed by Yamazaki. Yamazaki does not even mention the wavelength or photon energy of its UV light, and its disclosed mercury-vapor lamp cannot make light with photon energy over 6.7 eV, and very probably does not even produce the 5.0 eV needed to break Si-N bonds that are recited in claim 3.

Double Patenting. Terminal disclaimers are attached to overcome the double patenting rejection, which is respectfully traversed for the record.

Withdrawal of the rejections is requested.

Respectfully submitted,

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Date



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